

WHAT IS CLAIMED IS:

1. A solid reagent comprising an organic polymer base in which a graft polymer side chain is introduced onto the backbone of the organic polymer base and a reactive functional group is introduced onto the polymer side chain.
2. The solid reagent of claim 1 wherein the organic polymer base is in the form of a fiber, a woven or nonwoven fabric consisting of an assembly of fibers, a porous membrane or a hollow fiber membrane.
3. The solid reagent of claim 1 or 2 wherein the graft polymer side chain is introduced via a radiation-induced graft polymerization.
4. The solid reagent of any one of claims 1 to 3 wherein the reactive functional group serves as a reagent for any one of oxidation reaction, reduction reaction, deprotonation reaction, halogenation reaction or nucleophilic replacement reaction.
5. A process for preparing a solid reagent of any one of claims 1 to 4, comprising graft-polymerizing a polymerizable monomer having a reactive functional group onto the backbone of an organic polymer base to form a polymer side chain having the reactive functional group.
6. A process for preparing a solid reagent of any one of claims 1 to 4, comprising graft-polymerizing a polymerizable monomer having a group capable of being converted into a reactive functional group onto the backbone of an organic polymer base to form a polymer side chain and then converting the group capable of being converted into a reactive functional group on the polymer side chain into the reactive functional group.
7. The process of claim 5 or 6 wherein the graft polymerization is conducted via a radiation-induced graft polymerization.
8. A process for synthesizing an organic compound, comprising bringing a starting compound into contact with a solid reagent of any one of claims 1 to 4.
9. A multistage process for synthesizing an organic compound, comprising preparing a plurality of solid

reagents of any one of claims 1 to 4 having different functions and successively bringing a starting compound into contact with the plurality of solid reagents prepared.

10. An apparatus for synthesizing an organic compound, comprising a reaction column packed with a solid reagent of any one of claims 1 to 4; a material feeding section for feeding a starting compound to the reaction column; and a product recovery section for recovering the organic compound produced from the reaction column.

11. A multistage apparatus for synthesizing an organic compound, comprising a plurality of reaction columns packed with a plurality of solid reagents of any one of claims 1 to 4 having different functions; column connecting sections for connecting the plurality of reaction columns in series; a material feeding section for feeding a starting compound to the first one of the reaction columns connected in series; and a product recovery section for recovering the organic compound produced from the last reaction column.